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News Release

Defense Advanced Research Projects Agency

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IMMEDIATE RELEASE

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RASCAL CONTRACTORS SELECTED

The Defense Advanced Research Projects Agency (DARPA) has selected six contractor teams for the first phase of the Responsive Access, Small Cargo, and Affordable Launch (RASCAL) Demonstration program. Each team is expected to receive between \$1,000,000 and \$2,000,000 for the nine-month phase one study. The selected teams are:

- Coleman Research Corp., Orlando, Fla., teamed with Vela, Pan Aero, and XCOR Aerospace;
- Northrop Grumman Corp., Rancho Barnardo, Calif., teamed with Orbital Sciences Corp., NASA, and Spath Engineering;
- Pioneer Rocketplane Corp., Solvang, Calif., teamed with Scale Composite, Microcosm, Orbitec, and HMX;
- Space Launch Corp., Costa Mesa, Calif., teamed with Scale Composite;
- Space Access-LLC, Palmdale, Calif., teamed with APRI, Honeywell, and Microcosm; and
- Delta Velocity, Leesburg, Va., teamed with A²I², ATK, and Athena.

Preston H. Carter, DARPA's RASCAL program manager, explained, "DARPA's vision for the RASCAL program is to design and develop a dedicated and responsive orbital insertion capability for military and commercial small satellites. The program will develop a rapid, routine, small payload delivery system capable of providing flexible access to space using a combination of reusable and low cost expendable vehicle elements."

The RASCAL system will consist of two major elements: a first-stage reusable launch vehicle employing mass injection pre-compressor cooled turbojet engine technology and an upper expendable rocket vehicle designed with high mass fraction rocket stages.

In order to achieve a leap in affordable launch capabilities, the RASCAL program will:

- Demonstrate mission turn-around time within 24 hours of payload arrival;
- Deliver a 75-kilogram payload into a 500-kilometer sun-synchronous orbit;
- Demonstrate, through a credible cost-estimating model, that recurring launch costs for the RASCAL operating system will be \$750,000 per launch for a 75-kilogram payload; and
- Validate the ability to operate from a 2,500-meter runway with minimal peculiar support equipment and independent of test ranges for telemetry and tracking support.

(more)

During the phase one studies, teams will finalize their notional concepts to a system-level design and determine feasibility. Teams will also refine the RASCAL concept of operations, the mission cost model, and phase two and three program details. Phase one will end with a spiral downselect from these six teams to two teams to continue with system design for a 12-month second phase. During phase three, a single winning contractor will fabricate, integrate and flight-demonstrate two payload insertions in FY 2006.

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